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Destinataire :



Date d'expédition (jour/mois/année) 09 décembre 2004 (09.12.2004)	NOTIFICATION IMPORTANTE
Référence du dossier du déposant ou du mandataire B 14015.3 JL	
Demande internationale n° PCT/FR2003/000905	Date du dépôt international (jour/mois/année) 21 mars 2003 (21.03.2003)
Déposant COMMISSARIAT A L'ENERGIE ATOMIQUE etc	

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PATENT COOPERATION TREATY

PCT/FR2003/000905



Translation

PCT

INTERNATIONAL PRELIMINARY EXAMINATION REPORT

(PCT Article 36 and Rule 70)

Applicant's or agent's file reference B 14015.3 JL	FOR FURTHER ACTION See Notification of Transmittal of International Preliminary Examination Report (Form PCT/IPEA/416)	
International application No. PCT/FR2003/000905	International filing date (day/month/year) 21 mars 2003 (21.03.2003)	Priority date (day/month/year) 25 mars 2002 (25.03.2002)
International Patent Classification (IPC) or national classification and IPC H01L 21/68, 21/762		
Applicant COMMISSARIAT A L'ENERGIE ATOMIQUE		

1. This international preliminary examination report has been prepared by this International Preliminary Examining Authority and is transmitted to the applicant according to Article 36.

2. This REPORT consists of a total of 6 sheets, including this coversheet.

☒ This report is also accompanied by ANNEXES, i.e., sheets of the description, claims and/or drawings which have been amended and are the basis for this report and/or sheets containing rectifications made before this Authority (see Rule 70.16 and Section 607 of the Administrative Instructions under the PCT).

These annexes consist of a total of 2 sheets.

3. This report contains indications relating to the following items:

- I ☒ Basis of the report
- II ☐ Priority
- III ☐ Non-establishment of opinion with regard to novelty, inventive step and industrial applicability
- IV ☐ Lack of unity of invention
- V ☒ Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement
- VI ☐ Certain documents cited
- VII ☐ Certain defects in the international application
- VIII ☐ Certain observations on the international application

Date of submission of the demand 14 octobre 2003 (14.10.2003)	Date of completion of this report 28 June 2004 (28.06.2004)
Name and mailing address of the IPEA/EP	Authorized officer
Facsimile No.	Telephone No.

INTERNATIONAL PRELIMINARY EXAMINATION REPORT

International application No.

PCT/FR2003/000905

I. Basis of the report

1. With regard to the elements of the international application:*

- ☒ the international application as originally filed
- ☒ the description:
pages _____ 1-15 _____, as originally filed
pages _____, filed with the demand
pages _____, filed with the letter of _____
- ☒ the claims:
pages _____, as originally filed
pages _____, as amended (together with any statement under Article 19
pages _____, filed with the demand
pages _____ 1-8 _____, filed with the letter of _____ 09 June 2004 (09.06.2004)
- ☒ the drawings:
pages _____ 1/3-3/3 _____, as originally filed
pages _____, filed with the demand
pages _____, filed with the letter of _____
- ☐ the sequence listing part of the description:
pages _____, as originally filed
pages _____, filed with the demand
pages _____, filed with the letter of _____

2. With regard to the language, all the elements marked above were available or furnished to this Authority in the language in which the international application was filed, unless otherwise indicated under this item.
These elements were available or furnished to this Authority in the following language _____ which is:

- ☐ the language of a translation furnished for the purposes of international search (under Rule 23.1(b)).
- ☐ the language of publication of the international application (under Rule 48.3(b)).
- ☐ the language of the translation furnished for the purposes of international preliminary examination (under Rule 55.2 and/or 55.3).

3. With regard to any nucleotide and/or amino acid sequence disclosed in the international application, the international preliminary examination was carried out on the basis of the sequence listing:

- ☐ contained in the international application in written form.
- ☐ filed together with the international application in computer readable form.
- ☐ furnished subsequently to this Authority in written form.
- ☐ furnished subsequently to this Authority in computer readable form.
- ☐ The statement that the subsequently furnished written sequence listing does not go beyond the disclosure in the international application as filed has been furnished.
- ☐ The statement that the information recorded in computer readable form is identical to the written sequence listing has been furnished.

4. ☐ The amendments have resulted in the cancellation of:

- ☐ the description, pages _____
- ☐ the claims, Nos. _____
- ☐ the drawings, sheets/fig _____

5. ☐ This report has been established as if (some of) the amendments had not been made, since they have been considered to go beyond the disclosure as filed, as indicated in the Supplemental Box (Rule 70.2(c)).**

* Replacement sheets which have been furnished to the receiving Office in response to an invitation under Article 14 are referred to in this report as "originally filed" and are not annexed to this report since they do not contain amendments (Rule 70.16 and 70.17).

** Any replacement sheet containing such amendments must be referred to under item 1 and annexed to this report.

INTERNATIONAL PRELIMINARY EXAMINATION REPORT

International application No.
PCT/FR 03/00905

V. Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

1. Statement

Novelty (N)	Claims	2	YES
	Claims	1, 3-8	NO
Inventive step (IS)	Claims		YES
	Claims	1-8	NO
Industrial applicability (IA)	Claims	1-8	YES
	Claims		NO

2. Citations and explanations

1. Reference is made to the following documents:

- D1: EP-A-0 703 609 (COMMISSARIAT ENERGIE ATOMIQUE)
27 March 1996
- D2: EP-A-0 977 252 (COMMISSARIAT ENERGIE ATOMIQUE) 2
February 2000
- D3: FR-A-2 796 491 (COMMISSARIAT ENERGIE ATOMIQUE)
19 January 2001
- D4: EP-A-0 924 769 (SEIKO EPSON CORPORATION) 23
June 1999

2. Claim 1 does not define any subject matter that complies with the requirements of novelty and inventive step of the PCT (PCT Article 33(2) and (3)), for the following reasons:

2.1 Both D2 and D3 describe a method including the successive performance of the following steps:

- (a) bonding an element to be transferred from a donor substrate onto a carrier medium via a layer of adhesive (D2: figure 3, ref. 2, 4, 8 and 10; paragraph [0021]; D3: figure 5A, ref. 50, 52; figure 5B, ref. 53; figure 5D, ref. 55;

- page 20, lines 10 to 13);
- (b) thinning the donor substrate (D2: figure 4; paragraph [0022]; D3: figure 5C; page 21, lines 8 to 11);
 - (c) making holes or trenches implicitly causing a weakening of the adhesion of the layer of adhesive (D2: figure 5, ref. 12; paragraph [0024]; D3: figures 5B and 5C, ref. 54; page 20, line 19 to page 21, line 7; page 21, lines 18 to 30);
 - (d) transferring the element to be transferred onto the target substrate (D2: figure 7, ref. 18; paragraph [0028]; D3: figure 5D, ref. 55); and
 - (e) detaching the element to be transferred and the carrier medium (D2: figure 8; paragraph [0029]; D3: figure 5F).

2.2 Although D2 and D3 do not explicitly mention a "weakening of the adhesion of the layer of adhesive", said documents describe making trenches or holes that implicitly cause a weakening of the adhesion of the layer of adhesive (see D2: figure 5, ref. 12; paragraphs [0023], [0024], [0028] and [0029]; see D3, figure 5B, ref. 54; figure 5E, page 20, line 19 to page 21, line 7). The step of "weakening the adhesion of the layer of adhesive" is therefore implicitly present in D2 and D3.

2.3 **Claim 1 is therefore not novel (PCT Article 33(2)).**

2.4 The problem that the present invention is intended to solve can be considered to be that of providing an improved method for separating the two substrates bonded by an intermediate bonding layer.

2.5 The feature "weakening the adhesion of the layer of adhesive" of claim 1, proposed as the solution to the problem addressed by the present invention, has however already been used in a plurality of standard techniques. For example, D2 and D3 implicitly describe a weakening by trenches or holes, and D4 explicitly describes the use of heat to weaken the adhesion of a layer of adhesive between two bonded substrates (D4: abstract, figure 8; paragraph [0129]).

2.6 It is obvious for a person skilled in the art to select one of several obvious options, in order to obtain a weakening of the adhesion of a layer of adhesive and thereby solve the stated problem without an inventive step being involved.

2.7 Claim 1 therefore also lacks inventiveness (PCT Article 33(3)).

3. Dependent claims 2 to 9 contain no feature which, when combined with the features of any one of the claims to which they refer, defines subject matter that complies with the requirements of novelty and/or inventive step of the PCT (PCT Article 33(2) and (3)), for the following reasons:

3.1 The features of claims 3, 4, 5, 7 and 8 are known, for example, from D2 (D2: figures 3 to 8) and D3 (D3: figures 5A to 5F).
The feature of claim 6 is already known from D3 (D3: figure 5B, ref. 54; page 20, lines 19 to 23).

The subject matter of claims 3 to 8 is therefore neither novel nor inventive (PCT Article 33(2) and (3)).

- 3.2 The feature of claim 2 is known, for example, from D1 or D4 (see D1: column 6, line 51; column 7, lines 54 to 57; column 7, lines 9 to 21; D4: paragraph [0124]).

It is obvious for a person skilled in the art to apply this feature, with a corresponding effect, in a layer of adhesive according to D2 or D3 and thereby arrive at the subject matter according to claim 2.

The feature of claim 2 is therefore not considered inventive (PCT Article 33(3)).

4. Claims 1 to 8 comply with the requirements of industrial applicability of the PCT (PCT Article 33(4)).